

CLAIMS:

1. A filter for removing contaminants from a flowing fluid product,
said filter comprising a housing having an inlet and an outlet, a filter cartridge in the
housing, means for mounting the cartridge in the housing, and means for rotating
5 the cartridge.
2. A filter as claimed in claim 1, wherein said means for rotating the
cartridge comprises blades over which the fluid product passes and which apply a
torque to the cartridge.
3. A filter as claimed in claim 1, wherein said means for rotating the
10 cartridge is a nozzle from which the fluid product flows, the reaction force as the fluid
product leaves the nozzle causing the cartridge to rotate.
4. A filter as claimed in claim 1, wherein said means for rotating the
cartridge is a series of tangentially arranged nozzles from which the fluid product
flows, the reaction force as the fluid product leaves the nozzles causing the cartridge
15 to rotate.
5. A filter for removing contaminants from a flowing liquid product,
said filter comprising a housing having an inlet and an outlet, a filter cartridge having
a core, a float in the core, said float having a buoyancy such that it sinks in the liquid
product to be filtered and floats in a liquid which contaminates said liquid product,

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and a seat against which the float presses when it floats upwards with an increasing level of contaminant liquid in the housing, contact between said float and seat isolating said inlet from the outlet and terminating flow through the filter.

6. A filter for removing contaminants from a flowing liquid product, said filter comprising a housing having an inlet and an outlet, a filter cartridge in the housing, the cartridge having a hollow core, means for mounting the cartridge in the housing, means for rotating the cartridge, a float in the core, said float having a buoyancy such that it sinks in the liquid product to be filtered and floats in a liquid which contaminates said liquid product, and a seat against which the float presses when it floats upwards with an increasing level of liquid contaminant in the housing, contact between said float and seat isolating said inlet from the outlet and terminating flow through the filter.

7. A filter as claimed in claims 5 or 6, wherein said float, upon contacting the seat, seals off the outlet from the interior of the housing.

8. A filter cartridge for removing contaminants from a flowing liquid product, said filter cartridge comprising a hollow core, filter material surrounding the core and a float which can move vertically in the core.

9. A filter cartridge for removing contaminants from a flowing fluid product, said filter cartridge comprising a hollow core, a plurality of curved vanes extending outwardly from the core, each vane having a convex leading surface and

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a concave trailing surface and filter material packed into the depressions defined by said trailing surfaces.

10. A filter cartridge as claimed in claim 9 and including means which, when subjected to fluid product flowing through the cartridge, produces a reaction force for rotating the cartridge.

11. A filter cartridge as claimed in claims 9 or 10, and including a float in the hollow core.

12. A filter for removing contaminants from a flowing liquid product, said filter comprising a housing having a main inlet and a main outlet, a filter cartridge in the housing, a first float which sinks in the liquid product flowing through the housing but floats in the liquid contaminant, a first seat, said first float lifting into contact with said first seat and closing said main outlet as liquid contaminant accumulates in the housing, a drain outlet at the lower end of the housing, a valve closure element, a second seat, spring means for pressing said valve closure element into contact with said second seat thereby to close the drain outlet, a chamber, a connection between said chamber and the main outlet on the side of the first seat remote from said first float whereby suction is applied to said chamber, suction applied to said chamber exerting a force on said element to separate it from said second seat, and a second float which sinks in the liquid product flowing through the housing but floats in the liquid contaminant, said second float, when in its sunken position, closing off said drain outlet.

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13. A filter for removing contaminants from a flowing liquid product, said filter comprising a housing having a main inlet and a main outlet, a filter cartridge in the housing, the cartridge having a hollow core which is open at both its upper end and its lower end and filter material sheathing the core, a float which sinks in the liquid product flowing through the housing but floats in liquid contaminant, said float being in said hollow core, a seat, said float lifting into contact with said seat and closing said main outlet as liquid contaminant accumulates in the housing, filter material across the open lower end of the core through which liquid contaminant can flow into said core, flow of liquid contaminant through said filter material across said open lower end of the core occurring, in use, at a faster flow rate than the flow of liquid contaminant through the filter material sheathing the core.

14. A filter as claimed in any one of claims 1 to 7, 12 and 13, and including absorbent material located on the underside of said housing, liquid contaminant and solid contaminants discharged from the housing, in use, flowing into said absorbent material, the liquid contaminant evaporating therefrom into the atmosphere.

15. A filter as claimed in claim 14, and including a holder for said absorbent material, said holder having openings for permitting air to flow into the holder.